

JOINT PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS

AND

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

SUBJECT: Evaluation of a proposed U. S. Army Corps of Engineers (USACE) Regional General Permit (RGP) under Section 404 of the Clean Water Act (CWA) for discharges of dredged or fill material into waters of the United States and Section 10 of the Rivers and Harbors Act of 1899 for work in, or affecting, navigable waters of the United States and application for water quality certification under Section 401 of the CWA for Section 404 discharges associated with linear transportation construction and maintenance projects. An RGP may not be used to authorize work subject to regulation under Section 404 of the CWA until water quality certification has been issued or waived.

Section 1309 of the Transportation Equity Act for the 21st Century (TEA-21) calls for a coordinated environmental review process to expedite Federal highway and transit projects. The USACE and other federal agencies have agreed to streamline environmental review processes in accordance with TEA-21 and other relevant environmental statutes in ways that reinforce our responsibility to protect the aquatic environment. The USACE has worked closely with the Federal Highway Administration and the Texas Department of Transportation in developing this proposed RGP to support the streamlining provisions of TEA-21.

APPLICATION NUMBER: The "Proposed Regional General Permit, Linear Transportation Construction and Maintenance Projects" has been designated CESWF-02-RGP-3 in the Fort Worth District, 2001 00046 in the Albuquerque District, 22349 in the Galveston District, and TXG30010 in the Tulsa District.

DATE ISSUED: July 3, 2002

LOCATION: The provisions of this regional general permit will be applicable to all waters of the United States, including all navigable waters of the United States, within the State of Texas in the Albuquerque, Fort Worth, Galveston, and Tulsa Districts of the USACE (see "Location of Work" and Appendixes B and C of the Proposed Regional General Permit).

OTHER AGENCY AUTHORIZATIONS: State Water Quality Certification from the State of Texas. For those projects located in the Texas Coastal Management Area, Coastal Management Program Certification must be obtained from the Texas Coastal Coordination Council.

PROJECT DESCRIPTION: This proposed RGP, if issued, would provide Department of the Army (DA) authorization for recurring work that causes no more than minimal individual and cumulative adverse environmental impacts. An RGP serves to reduce administrative procedures and expedite decisions for routine permit actions. The enclosed "Proposed Regional General Permit, Linear Transportation Construction and Maintenance Projects" details the scope, location, terms and conditions, and application procedures of the proposed permit.

PUBLIC INTEREST REVIEW FACTORS: The proposed RGP will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the USACE, and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U.S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. The decision whether to authorize this RGP will be based on an evaluation of the probable impact, including cumulative impact, of the proposal on the public interest. That decision will reflect the national concerns for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including its cumulative effects. Among the factors addressed are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposal. Any comments received will be considered by the USACE in determining whether to adopt the proposed RGP. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposal.

STATE WATER QUALITY CERTIFICATION: Texas Natural Resource Conservation Commission (TNRCC) certification is required for work within the state of Texas that is subject to Section 404 of the CWA. Concurrently with the processing of this DA proposal, the TNRCC is reviewing this proposal under Section 401 of the CWA, and Title 31, Texas Administrative Code Section 279.1-.13 to determine if the work authorized by this RGP would comply with State water quality standards. By virtue of an agreement between the USACE and the TNRCC, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the TNRCC a decision on water quality certification under such act. **Any comments concerning the application may be submitted to the Texas Natural Resource Conservation Commission, 401 Coordinator, MSC-150, P.O. Box 13087, Austin, Texas 78711-3087.** The public comment period extends 30 days from the date of publication of this notice. A copy of the public notice with the proposed RGP is made available for review in the TNRCC's Austin Office. The complete application may be reviewed in the USACE's office. The TNRCC may conduct a public hearing to consider all comments concerning water quality if requested in writing. A request for a public hearing must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief description of the interest of the requestor, or of persons represented by the requestor; and a brief description of how the application, if granted, would adversely affect such interest.

Railroad Commission of Texas (RRC) certification is required for activities associated with the exploration, development, or production of oil, gas, or geothermal resources, as described in Tex. Nat. Res. Ann. ' 91.101. Concurrent with the processing of this DA Permit application, the RRC is reviewing this application under Section 401 of the CWA and Title 16, Texas Administrative Code, Section 3.93, to determine if the proposed work would comply with applicable water quality laws and regulations. By virtue of an agreement between the USACE and the RRC, this public notice is issued for the purpose of

advising all known interested persons that there is pending before the RRC a decision on water quality certification under the above authorities. Written comments concerning the request for certification may be submitted to the Assistant Director, Environmental Services, Railroad Commission of Texas, P. O. Box 12967, Austin, Texas 78711-2967. The public comment period extends 30 days from the date of publication of this notice. The RRC may also hold a public meeting on the request for certification if the RRC determines that a public meeting is in the public interest. If the RRC holds a meeting to receive public comment on a request for certification, the RRC will give notice of the meeting to the applicant, the USACE, and persons identified under 16 TAC ' 3.93(d)(2) at least ten days prior to the meeting.

THREATENED AND ENDANGERED SPECIES: No authorization would be granted under this RGP for an activity that is likely to jeopardize the continued existence of an endangered or threatened species or a species proposed for such designation, as identified under the Endangered Species Act, or for an activity that is likely to destroy or adversely modify the critical habitat of such species. Any activity that may affect an endangered or threatened species would require review by the USACE and consultation with the U. S. Fish and Wildlife Service.

NATIONAL REGISTER OF HISTORIC PLACES: The USACE will take into account the impact of activities authorized by this RGP on cultural resources listed, or eligible for listing, in the National Register of Historic Places (NRHP). If known or previously unknown cultural resources are encountered during work authorized by this permit, the permittee shall notify the appropriate USACE district and the resources shall be avoided until the USACE can assess their eligibility for listing in the NRHP. Sites determined to be eligible for listing in the NRHP shall be mitigated in consultation with the USACE. Cultural resources include prehistoric and historic archeological sites, and areas or structures of cultural interest that occur in the permit area.

SOLICITATION OF COMMENTS: This public notice is being distributed to all known interested persons in order to assist in developing facts upon which a decision by the USACE may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

PUBLIC HEARING: Prior to the close of the comment period any person may make a written request for a public hearing setting forth the particular reasons for the request. The District Engineer will determine whether the issues raised are substantial and should be considered in his/her decision. If a public hearing is warranted, all known interested persons will be notified of the time, date, and location of the hearing.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before August 2, 2002, the closing date of the comment period. Extensions of the comment period may be granted for valid reasons provided a written request is received by the closing date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to Mr. Presley Hatcher, Regulatory Branch, CESWF-PER-R, U.S. Army Corps of Engineers, P.O. Box 17300, Fort Worth, Texas 76102. You may visit the Regulatory Branch in Room 3A37 of the Federal Building at 819 Taylor Street in Fort Worth

during regular business hours, Monday through Friday. Telephone inquiries may be directed to Mr. Hatcher at (817)886-1740.

DISTRICT ENGINEERS
FORT WORTH DISTRICT
ALBUQUERQUE DISTRICT
GALVESTON DISTRICT
TULSA DISTRICT
CORPS OF ENGINEERS

PROPOSED REGIONAL GENERAL PERMIT

LINEAR TRANSPORTATION CONSTRUCTION AND MAINTENANCE PROJECTS

Interested parties are hereby notified that, in accordance with 33 CFR 322.2(f), 323.2(h), and 325.2(e)(2) published in the Federal Register November 13, 1986, the Fort Worth, Albuquerque, Galveston, and Tulsa Districts of the U. S. Army Corps of Engineers (USACE) propose to authorize the work described herein by regional general permit (RGP) pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

The purpose of this RGP is to expedite authorization of recurring work that would have minimal adverse impact on the aquatic environment. This RGP contains provisions intended to protect the environment, including natural and cultural resources. Work that does not comply with these provisions may require an individual permit. However, compliance with the conditions contained in this RGP does not guarantee authorization of the work under this RGP. Work or structures that will have unacceptable impacts on the public interest are not authorized. Activities requiring Department of the Army authorization that are not specifically covered by this permit are prohibited unless authorized by a separate permit.

Section 1309 of the Transportation Equity Act for the 21st Century (TEA-21) calls for a coordinated environmental review process to expedite Federal highway and transit projects. The USACE and other federal agencies have agreed to streamline environmental review processes in accordance with TEA-21 and other relevant environmental statutes in ways that reinforce our responsibility to protect the aquatic environment. The USACE has worked closely with the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT) in developing this RGP to support the streamlining provisions of TEA-21.

The proposed RGP has been designated CESWF-02-RGP-3 in the Fort Worth District, 2001 00046 in the Albuquerque District, 22349 in the Galveston District, and TXG30010 in the Tulsa District.

SCOPE OF WORK

Work authorized by this regional general permit is limited to the discharge of dredged or fill material into waters of the United States, including wetlands, and the placement of structures and performance of work in navigable waters of the United States, associated with linear transportation construction and maintenance projects, including, but not limited to, those projects implemented by the TxDOT, as described below. Linear transportation projects include highways, roads, railways, trails, and airport runways and taxiways. Maintenance is defined as:

1. the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill authorized by 33 CFR 330.3, provided the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement, are allowed provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement changes are minimal. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. This RGP

authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire, or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the USACE, provided the permittee can demonstrate funding, contract, or similar delays; or

2. the removal of accumulated sediments and debris in the vicinity of, and within, existing structures (e.g., bridges, culverted road crossings, etc.) and the placement of new riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. All excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the USACE. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the USACE.

Construction is defined as any construction, modification, improvement, or other work that does not meet the definition of “maintenance” above.

Activities that may be authorized by this regional general permit include the following:

1. **General Construction:** Construction, expansion, modification, or improvement of linear transportation projects.
2. **Adding or Widening Pavement:** Widening of travel lane or lanes up to two (2) feet or adding shoulders up to four (4) feet to correct a safety and/or maintenance problem (including subgrade, base and surfacing).
3. **Storm Water Pollution Prevention:** Maintenance or installation of storm water pollution protection plans (SWPPP) in compliance with (U. S. Environmental Protection Agency (EPA) regulations.
4. **Stream and Ditch Maintenance:** Removal of accumulated silt or drift, and/ or filling eroded areas to restore original contours.
5. **Slope Repair/Stabilization:** Slope repair and/or stabilization, including removing material or placing fill material for the repair of failed areas and stabilizing the slope by seeding, sodding and placing wood, straw or coconut fiber mat, synthetic mat, paper mat, jute mesh or other material as a soil retention blanket for erosion control on the slope of the waterway.
6. **Culvert and Storm Drain Maintenance:** The repair and maintenance of culverts and storm drains up to bridge classification (twenty feet measured along centerline of roadway). This work includes silt and debris removal; inlet, grate, or storm drain cleaning; and other maintenance activities related to culverts and storm drains, including the application of safety end treatments. Safety end treatments are concrete wing walls on the end of culverts designed to enhance safety by including horizontal supports to assist a striking vehicle in traversing the open culvert end.

7. **Driveway Installation/Removal and Maintenance:** Installation and maintenance of driveways for public or private access.

8. **Boat Ramp Maintenance:** Work performed in maintaining existing boat ramps, including repair of scoured areas and maintenance of associated paved and unpaved areas.

9. **Roadside Maintenance:** Work performed in maintaining roadside areas, including maintenance and construction of linear elements of rest stops and roadside parks, ditch liners, retards, down drains, ROW fences, cattle guards, islands, riprap, and fireguards, and the repair of concrete ditch lining to prevent erosion from run-off water and riprap toe walls.

10. **Portable Bridges:** Installation, removal, and maintenance of portable bridges, normally placed on piers or abutments by crane.

11. **Bridge Channel Maintenance:** Removal of accumulated silt and drift; filling eroded areas; maintenance and repair of fenders, jetties, dikes, and riprap; and channel maintenance within 200 feet upstream and/or downstream of bridge structures (including approach embankment).

12. **Bridge Substructure Maintenance:** Routine maintenance of substructures including caps, columns, abutments, wingwalls, piling, etc., including removing silt, debris and all loose or deteriorated concrete from creek and repairing of cracked or spalled areas on concrete piling, columns, and caps by such means as erecting scaffolding from the streambed.

This RGP authorizes mechanized land clearing in waters of the United States necessary for highway and road construction and maintenance projects, provided the cleared area is kept to the minimum necessary and there is no more than minimal adverse impact on the aquatic environment. This RGP authorizes all activities necessary for construction and maintenance of linear transportation projects within the USACE permit area. The USACE permit area includes all waters of the United States affected by activities associated with the project, as well as any additional area of non-waters of the United States in the immediate vicinity of, directly associated with, and/or affected by, activities in waters of the United States. The USACE permit area(s) may include temporary fill and structures, coffer dams, equipment ramps, borrow pits, disposal areas, staging areas, and detention ponds for stormwater management. This RGP does not authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, buildings at roadside parks or rest stops, train stations, or aircraft hangars. Such non-linear features may be authorized by other general permits, such as nationwide permit 39 for residential, commercial, and institutional developments. This RGP does not authorize maintenance dredging for the primary purpose of navigation or flood control improvements. This RGP does not authorize activities that would have substantial adverse impacts on the aquatic environment or cause a substantial reduction in the reach of waters of the United States.

The activities listed above are authorized by this RGP provided they meet all of the following criteria:

1. The discharges shall not cause the loss of greater than 3 acres of waters of the United States or the loss of greater than 1,000 feet of perennial or intermittent stream for each single and complete project. "Loss of waters of the United States" is defined as "waters of the United States that are filled or permanently adversely affected by flooding, excavation, or drainage as a result of the regulated activity." For the purposes of this RGP, the definition of "single and complete project" at 33 CFR 330.2(i) will apply.

2. Adverse impacts to waters of the United States, including wetlands, caused by highway and road construction and maintenance projects shall be minimized to the extent practicable by such means as taking the route through waters of the United States that would have the least adverse impact on the aquatic environment and minimize, to the extent practicable, the width of ground disturbance and clearing of vegetation. Crossings of waters of the United States shall be avoided and minimized where practicable alternatives exist. Highways and roads shall be designed to pass low flows and expected high flows, to not interfere with the migration of aquatic organisms, avoid the creation of impoundments, and maintain the preconstruction upstream and downstream flow conditions to the extent practicable.

3. All highway and road construction and maintenance above the existing ground elevation in waters of the United States must minimize adverse impacts to local hydrology by incorporating bridges and culverts when appropriate. Highways and roads shall not promote the drainage of waters of the United States or cause unnecessary impoundment of water. New bridges or culverts in wetlands shall be spaced no farther than 500 feet apart and at all surface drainages. Bridges and culverts shall be sized to adequately pass low flows and expected high flows. Roadside borrow ditches in wetlands must be justified, and if allowed, shall not be continuous. Each section of borrow ditch shall be no longer than 300 feet and shall be separated from adjacent sections of ditch by at least 50 feet of unexcavated ground.

4. All soil-disturbing activities shall be conducted in a manner that will minimize the extent and duration of exposure of unprotected soils. Measures to control erosion and run-off, such as berms, silt screens, sedimentation basins, revegetation, mulching, and similar means, shall be implemented. Permittees shall repair all damage resulting from sedimentation and/or erosion.

5. When appropriate and practicable, compensatory mitigation shall be provided for unavoidable adverse impacts to waters of the United States, including wetlands (See Appendix D).

6. The activity is part of a single and complete project for crossing or otherwise impacting a water of the United States. Where a road segment (i.e., the shortest segment of a road with independent utility that is part of a larger project) has multiple crossings of streams (several single and complete projects), the USACE will consider whether authorization by an individual permit will be required.

7. Preconstruction Notification: Prior to construction, a prospective permittee must notify the USACE of the proposed work in accordance with the requirements of the "Preconstruction Notifications" section below if the discharge or work would:

a. cause the loss of greater than 1/10 acre of non-tidal waters of the United States for construction projects;

b. cause the loss of greater than 1/3 acre of non-tidal waters of the United States for maintenance projects;

c. cause the loss of any tidal waters of the United States as defined in 33 CFR 328.4(b)(1), including wetlands;

d. cause the loss of greater than 200 feet of perennial or intermittent stream;

- e. result in permanent or temporary adverse effects to forested wetlands;
 - f. be for the construction of a linear transportation project that runs through waters of the United States parallel to a perennial or intermittent stream;
 - g. occur within wetlands typically referred to as pitcher plant bogs, that are characterized by an organic surface soil layer and include vegetation such as pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.);
 - h. occur within
 - 1) the area of Caddo Lake within Texas that is designated as a “Wetland of International Importance” under the Ramsar Convention; or
 - 2) the Comal River, the San Marcos River, the Pecos River, Lake Casa Blanca, or within areas identified as critical habitat for the Concho Water snake (*Nerodia hateri paucimaculata*), including areas of the Concho and Colorado Rivers and Ivie (Stacy) Reservoir, Houston toad (*Bufo houstonensis*), or the Arkansas River shiner (*Notropis girardi*) (see also General Condition 16); or
 - i. involve 3-D seismic test discharges conducted within the coastal zone of Texas.
8. For cases where USACE preconstruction notification (PCN) is required, and the loss of waters of the United States would be greater than ½ acre, permittees shall submit a written compliance report to the USACE within 120 days after completion of all work that includes the following:
- a. a statement addressing whether the authorized work and mitigation required to date have been implemented in accordance with the USACE authorization, including all general and special conditions;
 - b. a summary of all construction and mitigation activities associated with the project that have occurred, including documentation of the completion of all work and compliance with all terms and conditions of the permit;
 - c. a comparison of the pre- and post-construction conditions of the project area;
 - d. a detailed description of all impacts that have occurred to waters of the United States;
 - e. a map showing the final configuration of restored, enhanced, created and preserved waters of the United States, including wetlands;
 - f. a presentation of the species of plants, number and acreage of vegetation planted, final topographic elevations of the project, and a map describing the location of the plantings;
 - g. a discussion about whether disturbed areas, such as borrow ditches, road embankments, stream banks, road crossings, and temporary impact areas are revegetating adequately and not suffering erosion damage; and
 - h. photographs and maps as appropriate to illustrate the information presented.

The prospective permittee shall not begin any activity requiring preconstruction notification until notified in writing by the USACE that the activity is authorized under this RGP with any special conditions imposed by the USACE. The USACE will respond as promptly as practicable to all PCNs.

CONDITIONS OF THE RGP

In addition to the limitations in the scope of work, work authorized by this RGP is subject to the general conditions listed in Appendix A. References in the general conditions to “completion of construction” refer to completion of work within the permit area for the DA work in, and adjacent to, waters of the United States, including wetlands. Also, for projects requiring water quality certification, projects are subject to the conditions of the water quality certification that applies and, for projects requiring Texas Coastal Management Program (CMP) certification, projects are subject to the conditions of the Texas CMP certification that applies.

LOCATION OF WORK

The provisions of this regional general permit are applicable to all waters of the United States, including all navigable waters of the United States, within the State of Texas in the Albuquerque, Fort Worth, Galveston, and Tulsa Districts (see the attached map and list of navigable waters, Appendixes B and C).

WATER QUALITY CERTIFICATION

State water quality certification under Section 401 of the Clean Water Act for the proposed RGP is currently being sought from the Texas Natural Resource Conservation Commission (TNRCC) and the Railroad Commission of Texas (RRC).

COASTAL MANAGEMENT PROGRAM CONSISTENCY

Projects within the boundary of the Texas CMP require certification from the Coastal Coordination Council (CCC) that the project is consistent with the Texas CMP. Texas CMP Consistency for the proposed RGP is being sought from the Texas Coastal Coordination Council. Projects authorized by this proposed RGP would have a minimal adverse effect on the coastal zone and are believed to be consistent with the Texas CMP goals and policies and would be conducted in a manner consistent with said program.

AUTHORIZATION FROM OTHER AGENCIES

This RGP does not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law. The permittee is responsible for obtaining any additional federal, state, or local permits or approvals that may be required, including, but not limited to:

1. When streambed materials such as sand, shell, gravel and marl would be disturbed or removed from state-owned waters in Texas, the permittee may be required to obtain a permit from the Texas Parks and Wildlife Department (TPWD), 4200 Smith School Road, Austin, Texas 78744. All activities occurring on lands owned or managed by the TPWD require a signed agreement from that agency prior to commencing operations.
2. Permittees whose activities would result in the introduction of fish, shellfish, or aquatic plants into public waters of the state may be required to obtain a permit from the TPWD, 4200 Smith School Road, Austin, Texas 78744.

3. All activities in Texas located on lands under the jurisdiction of the Texas General Land Office (GLO), 1700 North Congress Avenue, Austin, Texas 78701-1495, must have prior approval from that office. The placement of structures onto state-owned streambeds, state-owned uplands, or coastal state-owned lands in Texas may require the issuance of a lease or easement from the GLO.
4. Any work that would be conducted on lands or in waters under the jurisdiction of any river authority or other operating agency may require a permit from that agency.
5. Projects involving government property at USACE reservoirs require submission of detailed design information to the reservoir manager and USACE approval for the proposed activity to occur on government property, including a real estate consent to easement.
6. Activities within a 100-year floodplain may require a floodplain development permit from the local floodplain administrator or the TNRCC Flood Management Unit, (512)239-4771 (see also general condition 30). In addition, evidence that the project meets non-encroachment restrictions in regulatory floodways may be required.
7. In accordance with the federal Clean Water Act and Texas statute, a point source discharge of pollutants from an outfall structure must be authorized, conditionally authorized, or specifically exempted from regulation under the terms of the Texas Pollutant Discharge Elimination System (TPDES) program through the TNRCC, Water Quality Division (MC-150), P. O. Box 13087, Austin, Texas 78711-3087.
8. Activities such as clearing, grading, and excavation that would disturb five or more acres of land may require a National Pollutant Discharge Elimination System (NPDES) storm water management permit from the U.S. Environmental Protection Agency (EPA), Region 6, Water Quality Protection Division (6WQ), 1445 Ross Avenue, Dallas Texas 75202 or a TPDES storm water management permit from the TNRCC, Water Quality Division (MC-150), P. O. Box 13087, Austin, Texas 78711-3087.
9. The use of scrap tires for bank stabilization and erosion control requires notification of the TNRCC Waste Tire Recycling Program, P. O. Box 13087, Austin, Texas 78711-3087.
10. The construction, operation, maintenance, or connection of facilities at the borders of the United States are subject to Executive control and must be authorized by the President, Secretary of State, or other delegated official. Activities that would require such authorization and would affect an international water in Texas, including the Rio Grande, Amistad Reservoir, Falcon Lake, and all tributaries of the Rio Grande, may require authorization from the International Boundary and Water Commission, The Commons, Building C, Suite 310, 4171 North Mesa Street, El Paso, Texas 79902.
11. Projects involving construction of a bridge or equivalent structure across a navigable water of the United States may require authorization from the U. S. Coast Guard under Section 9 of the Rivers and Harbors Act of 1899. For further information on Section 9 authorization, please contact the Bridge Administration Branch, Eighth Coast Guard District, 501 Magazine Street, New Orleans, Louisiana 70130-3396, telephone (504)589-2965.
12. Activities outside the USACE permit area that may affect a federally listed endangered or threatened species or its critical habitat could require permits from the U.S. Fish and Wildlife Service (FWS) to prevent a violation of the Endangered Species Act under Section 9. For further information, contact the

U. S. Fish and Wildlife Service in **Arlington**: WinSystems Centre Building, 711 Stadium Drive East, Suite 252, Arlington, Texas 76011, (817)277-1100, <http://arlingtontexas.fws.gov> ; **Austin**: Hartland Bank Building, 10711 Burnet Road, Suite 200, Austin, Texas 78758, (512)490-0057, <http://ifw2es.fws.gov/austintexas/> ; **Corpus Christi**: TAMU-CC, Campus Box 338, 6300 Ocean Drive, Corpus Christi, Texas 78412, (512)994-9005, <http://ifw2es.fws.gov/corpuschristitexas/> ; **Houston**: 17629 El Camino Real, Suite 211, Houston, Texas 77058, (713)286-8282, <http://ifw2es.fws.gov/clearlaketexas> .

PRECONSTRUCTION NOTIFICATIONS

Preconstruction notifications (PCNs) requesting verification from the USACE of authorization under this RGP must include a written description of the project, proposed construction schedule, and the name, address and telephone number of a point of contact who can be reached during normal business hours. The information may be assembled and submitted in a format convenient to the applicant. The detail of the information should be commensurate with the size and environmental impact of the project. The description of the project must include at least the following information:

1. the purpose of, and need for, the project;
2. a delineation and description of wetlands and other waters of the United States in the area that would be affected by the proposed work, and a description of the project's likely impact on the aquatic environment. Delineations of wetlands must be conducted using the "Corps of Engineers Wetland Delineation Manual", USACE Waterways Experiment Station Wetlands Research Program Technical Report Y-87-1, dated January 1987 (on-line edition available at <http://www.wes.army.mil/el/wetlands/wlpubs.html>), including all supplemental guidance (currently includes guidance dated October 7, 1991, and March 6, 1992). The supplemental guidance is included in the on-line version and may also be obtained from your USACE district office. In addition, include the width and depth of the water body and the waterward distance of any structures from the existing shoreline;
3. a vicinity map (e.g., county map, USGS topographic map, etc.) showing the location of all temporary and permanent elements of the project, including the route of the entire highway or road, borrow pit(s), disposal site(s), staging area(s), etc. This map, or an additional map, must show the project area in relation to nearby highways and other roads, and other pertinent features. A ground survey is not required to obtain this information. (All maps and drawings must be submitted on 8½ by 11 inch sheets.);
4. plan, profile, and cross-section views of all work (fills, excavations, structures, etc.), both permanent and temporary, in, or adjacent to, waters of the United States, including wetlands, and a description of the proposed activities and structures, such as the dimensions and/or locations of highways and roads (both temporary and permanent), coffer dams, equipment ramps, borrow pits, disposal areas, staging areas, haul roads, and other project related areas within the USACE permit area(s). The permit area(s) includes all waters of the United States affected by activities associated with the project, as well as any additional area of non-waters of the United States in the immediate vicinity of, directly associated with, and/or affected by, activities in waters of the United States. The USACE permit area(s) includes borrow pits, disposal areas, staging areas, etc. in many cases. Off-site portions of the permit area(s) (borrow pits, disposal areas, staging areas, etc. must be addressed even if the precise locations would not be known before a contractor is selected. A description of the proposed highways and roads must include such information as the road's height, width, and length, width of the cleared right-of-way, location of each

crossing of a water of the United States, size and spacing of culverts and bridges. (All maps and drawings must be submitted on 8½ by 11 inch sheets.);

5. the volume of material proposed to be discharged into and/or excavated from waters of the United States and the proposed type and source of the material;
6. a written discussion of the alternatives considered and the rationale for selecting the proposed alternative as the least environmentally damaging practicable alternative. Practicable alternatives that do not involve a discharge into a special aquatic site, such as wetlands, are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise. The application must also include documentation that the amount of area impacted is the minimum necessary to accomplish the project;
7. an assessment of the adverse and beneficial effects, both permanent and temporary, of the proposed work and documentation that the work would result in no more than a minimal adverse impact on the aquatic environment;
8. a mitigation plan presenting appropriate and practicable measures planned: a) to avoid and minimize adverse impacts to the aquatic environment, particularly associated with temporary elements of the proposed project, and b) to compensate for the remaining unavoidable adverse impacts to the aquatic environment. If compensatory mitigation for unavoidable adverse impacts to the aquatic environment is not proposed, the application must include documentation that the proposed work would have minimal adverse impact on the aquatic environment without compensatory mitigation and that compensatory mitigation should not be required. The mitigation plan must include a description of proposed appropriate and practicable actions that would restore, enhance, protect, and/or replace the functions and values of the aquatic ecosystem unavoidably lost in the project area because of the proposed work. See Appendix D for more information;
9. an assessment documenting whether any species listed as endangered or threatened under the Endangered Species Act might be affected by, or found in the vicinity of, the USACE permit area for the proposed project. Coordination with the FWS concerning the potential impact of the entire project on endangered and threatened species is strongly encouraged. See contact information, including website addresses, for FWS offices in Texas in “AUTHORIZATION FROM OTHER AGENCIES” section above;
10. a discussion documenting whether any cultural resources, particularly those historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP), would be affected by, or are in the vicinity of, the USACE permit area for the proposed project; and
11. the applicant should include any other relevant information, including information on hydrology and hydraulics.

When a PCN is required, early coordination with the USACE and resource agencies, well before a final PCN is submitted, is beneficial in most cases. The USACE strongly encourages such early coordination.

Address PCNs and inquiries concerning proposed activities to the appropriate district office (see Appendix A for boundaries of district offices):

Fort Worth District: Regulatory Branch, U.S. Army Corps of Engineers, Fort Worth District, ATTN: CESWF-PER-R, P.O. Box 17300, Fort Worth, TX 76102-0300, telephone: (817)886-1731

Albuquerque District: El Paso Regulatory Office, U.S. Army Corps of Engineers, Albuquerque District, ATTN: CESP-OD-R, P.O. Box 6096, Fort Bliss, TX 79906-0096, telephone: (915)568-1359

Galveston District: Regulatory Branch, U. S. Army Corps of Engineers, Galveston District, ATTN: CESWG-PE-R, P. O. Box 1229, Galveston, TX 77553-1229, telephone: (409)766-3930

Tulsa District: Regulatory Branch, U.S. Army Corps of Engineers, Tulsa District, ATTN: CESWT-PE-R, 1645 South 101st East Avenue, Tulsa, OK 74128-4609, telephone: (918)669-7400

EVALUATION AND VERIFICATION PROCEDURES

For activities that would require a PCN and

1. cause the loss of greater than one (1) acre of waters of the United States, including wetlands;
2. the loss of any tidal waters;
3. the loss of greater than 200 feet of perennial or intermittent stream;
4. occur within any of the following habitat types:
 - a. wetlands, typically referred to as pitcher plant bogs, that are characterized by an organic surface soil layer and include vegetation such as pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.);
 - b. baldcypress-tupelo swamps: wetlands comprised predominantly of baldcypress trees (Taxodium distichum), and water tupelo trees (Nyssa aquatica), that are occasionally or regularly flooded by fresh water. Common associates include red maple (Acer rubrum), swamp privet (Forestiera acuminata), green ash (Fraxinus pennsylvanica) and water elm (Planera aquatica). Associated herbaceous species include lizard's tail (Saururus cernuus), water mermaid weed (Proserpinaca spp.), buttonbush (Cephalanthus occidentalis) and smartweed (Polygonum spp.). (Eyre, F. H. Forest Cover Types of the United States and Canada. 1980. Society of American Foresters, 5400 Grosvenor Lane, Washington, D.C. 20014. Library of Congress Catalog Card No. 80-54185); or
5. occur within the area of Caddo Lake within Texas that is designated as a Wetland of International Importance under the Ramsar Convention

the USACE shall coordinate with the EPA, FWS, TPWD, TNRCC, and for projects located within the Galveston District, the National Marine Fisheries Service and the GLO, to obtain their concurrence with

authorizing the proposed work under this RGP. Coordination may be conducted by telephone, facsimile transmission, and/or letter. Should one of the appropriate agencies not concur, the proposed work would require authorization by individual permit or other means. The USACE encourages the resource agencies to provide constructive input to the USACE on their reasoning in cases where they do not concur. A verbal or written response from each contacted agency is required to complete the interagency coordination process and concurrence may not be presumed in the absence of a response unless allowed by written procedures developed between the USACE and the agency, or agencies, in question. The USACE strongly encourages pre-application coordination with these agencies through the USACE.

In cases where the RGP cannot be used because of resource agency nonconcurrence, the USACE will streamline, to the extent practicable, the standard individual permit process, including promptly issuing a public notice. In those cases, the USACE will consider the application for this RGP to be the application for a standard individual permit with the submittal of a completed standard individual permit application form (Eng Form 4345) that incorporates the information in the PCN for the RGP and includes the names and addresses of adjoining property owners.

For activities not requiring a PCN, construction may commence when the applicant can ensure that all terms and conditions of this RGP can be met. For activities requiring a PCN, construction may commence only upon written notification by the District Engineer, or his/her designee, that the project meets the terms and conditions of the RGP. In all cases, the USACE will notify the permit applicant whether the proposed project meets or does not meet the terms and conditions of this RGP. The USACE will respond as promptly as practicable to all PCNs.

It is the applicant's responsibility to insure that all authorized structures and activities continue to meet the terms and conditions set forth herein; failure to abide by them will constitute a violation of the Clean Water Act and/or the Rivers and Harbors Act of 1899. Projects outside the scope of this regional general permit can be considered for authorization by individual permit.

This permit shall become effective on the date of the signature of the District Engineers, or their authorized representative(s), and will automatically expire five years from that date unless the permit is modified, revoked, or extended before that date. Activities that have commenced, i.e. are under construction, or are under contract to commence in reliance upon this permit will remain authorized provided the activity is completed within twelve months of the date of this permit's expiration,

modification, or revocation, unless discretionary authority is exercised on a case-by-case basis to modify, suspend, or revoke the authorization.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:
FOR THE DISTRICT ENGINEERS:

Gordon M. Wells
Colonel, Corps of Engineers
District Engineer
Fort Worth District

Dana R. Hurst
Lieutenant Colonel, Corps of Engineers
District Engineer
Albuquerque District

Leonard D. Waterworth
Colonel, Corps of Engineers
District Engineer
Galveston District

Robert L. Suthard, Jr.
Colonel, Corps of Engineers
District Engineer
Tulsa District

APPENDIX A

GENERAL CONDITIONS

REGIONAL GENERAL PERMIT

LINEAR TRANSPORTATION CONSTRUCTION AND MAINTENANCE PROJECTS

CESWF-02-RGP-3, 2001 00046, 22349, and TXG30010

1. In verifying authorization under this regional general permit (RGP), the Department of the Army has relied in part on the information provided by the permittee. If, subsequent to verifying authorization, such information proves to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part.
2. Structures and activities authorized by this RGP shall comply with all terms and conditions herein. Failure to abide by such conditions invalidates the authorization and may result in a violation of the law, requiring restoration of the site or other remedial action.
3. This RGP is not an approval of the design features of any authorized project or an implication that such project is adequate for the intended purpose: a Department of the Army permit merely expresses the consent of the Federal Government to conduct the proposed work insofar as public rights are concerned. This RGP does not grant any property rights or exclusive privileges; does not authorize any injury to the property or rights of others; and does not authorize any damage to private property, invasion of private rights, or any infringement of federal, state or local laws or regulations. This RGP does not relieve the permittee from the requirement to obtain a local permit from the jurisdiction within which the project is located.
4. This RGP may be modified or suspended in whole or in part if it is determined that the individual or cumulative impacts of work that would be authorized using this procedure are contrary to the public interest. The authorization for individual projects may also be summarily modified, suspended, or revoked, in whole or in part, upon a finding by the District Engineer that such action would be in the public interest.
5. Modification, suspension or revocation of the District Engineer's authorization shall not be the basis for any claim for damages against the United States.
6. This RGP does not authorize interference with any existing or proposed Federal project, and does not entitle the permittee to compensation for damage or injury to the structures or activities authorized herein that may result from existing or future operations undertaken by the United States in the public interest.
7. No attempt shall be made by permittees to prevent the full and free public use of any navigable water of the United States.
8. Permittees shall not cause any unreasonable interference with navigation.

9. Permittees shall make every reasonable effort to conduct the activities in a manner that will minimize any adverse impact of the work on water quality, fish and wildlife, and the natural environment, including adverse impacts to migratory waterfowl breeding areas, spawning areas, and trees, particularly hard-mast-producing trees such as oaks and hickories.
10. Permittees shall allow the District Engineer and his/her authorized representative(s) to make periodic inspections at any time deemed necessary to ensure that the activity is being performed in accordance with the terms and conditions of this RGP.
11. Permittees must evaluate the effect that the proposed work would have on historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP) prior to the initiation of work. Historic properties include prehistoric and historic archeological sites, and areas or structures of cultural interest that occur in the permit area. If a known historic property would be encountered, the permittee shall notify the USACE and shall not conduct any work in the permit area that would affect the property until the requirements of 33 CFR Part 325, Appendix C, have been satisfied. If a previously unknown historic property is encountered during work authorized by this RGP, the permittee shall immediately notify the USACE and avoid further impact to the site until the USACE has verified that the requirements of 33 CFR Part 325, Appendix C, have been satisfied.
12. Materials to be placed into waters of the United States are restricted to clean native soils and concrete, sand, gravel, rock, and other coarse aggregate. All material used shall be free of toxic pollutants in toxic quantities.
13. Permittees shall coordinate all construction activities in federally maintained channels and/or waterways for required setback distances with the USACE prior to application for a permit.
14. Permittees shall place all heavy equipment working in wetlands on mats, or take other appropriate measures to minimize soil disturbance.
15. Activities within the USACE permit area that are likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Endangered Species Act, or that are likely to destroy or adversely modify the critical habitat of such species are not authorized. Permittees shall notify the District Engineer if any listed species or critical habitat might be affected by, or is in the vicinity of, the project and shall not begin work until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.
16. Permittees shall not significantly disrupt the movement of those species of aquatic life indigenous to the water body or those species that normally migrate through the project area.
17. Permittees shall not permanently restrict or impede the passage of normal or expected high flows unless the primary purpose of the activity is to temporarily impound water or for authorized detention ponds for stormwater management.
18. Permittees shall properly maintain all structures and fills to insure public safety.

19. Permittees shall insure that projects have no more than minimal adverse impacts on public water supply intakes.
20. Permittees shall avoid stream realignment to the extent practicable.
21. Permittees shall avoid and minimize discharges of dredged or fill material into waters of the United States through the use of practicable alternatives.
22. Permittees shall design facilities to be stable against the forces of flowing water, wave action, and the wake of passing vessels.
23. Permittees shall use and maintain appropriate erosion and siltation controls in effective operating condition during construction, and permanently stabilize all exposed soil at the earliest practicable date. Permittees shall remove all excess material and temporary fill and structures placed in waters of the United States, including wetlands, to upland areas and stabilize all exposed slopes and stream banks immediately upon completion of construction. Material may be temporarily sidecast into waters of the United States for up to 90 days provided that the material is placed in a manner that will not allow it to be dispersed by currents or other forces. Areas affected by temporary fills and/or structures shall be returned to preconstruction conditions or better, including revegetation with native vegetation. All material removed must be placed at least 100 feet from any water of the United States, including wetlands, and adequately contained to prevent the return to any water of the United States, including wetlands.
24. Permittees are not authorized to discharge dredged or fill material into waters of the United States for purposes of disposal into, or reclamation of, an aquatic area, such as a wetland.
25. The use of a jet barge or similar equipment for trench excavation is not authorized.
26. Permittees shall mark structures or fills in navigable waters, when appropriate, so that their presence will be known to boaters.
27. This permit does not authorize work in a park, wildlife management area, refuge, sanctuary, or similar area administered by a federal, state or local agency without that agency's approval.
28. Permittees are responsible for compliance with all terms and conditions of this RGP for all activities within the Department of the Army permit area of a project authorized by this RGP, including those taken on behalf of the permittee by other entities such as contractors and subcontractors. Permittees assume all liabilities associated with fills and impacts that are incurred by individuals and/or organizations working on contracts with the permittee. Before beginning the work authorized herein or directing a contractor to perform such work, permittees shall ensure that all parties read, understand and comply with the terms and conditions of this permit. The USACE strongly encourages pre-construction meetings with all construction contractor(s) detailing the terms and conditions of this permit prior to commencing construction activities of the project.
29. Permittees shall conduct dredging and excavation activities with landbased equipment rather than from the water body whenever practicable.

30. Permittees may not use this RGP with another general permit for a single and complete project except when the acreage loss of waters of the United States does not exceed the acreage limit of the general permit with the highest specified acreage limit.

31. Permittees must comply with Federal Emergency Management Agency (FEMA), or FEMA-approved local floodplain development requirements in the placement of any permanent above-grade fills in waters of the United States, including wetlands, within the 100-year floodplain. The 100-year floodplain will be identified through FEMA's Flood Insurance Rate Maps or FEMA-approved local floodplain maps. A permanent above-grade fill is a discharge of dredged or fill material into waters of the United States, including wetlands, that results in a substantial increase in ground elevation and permanently converts part or all of the water body to dry land. Structural fills authorized by nationwide permits 3, 25, 36, etc., are not included.

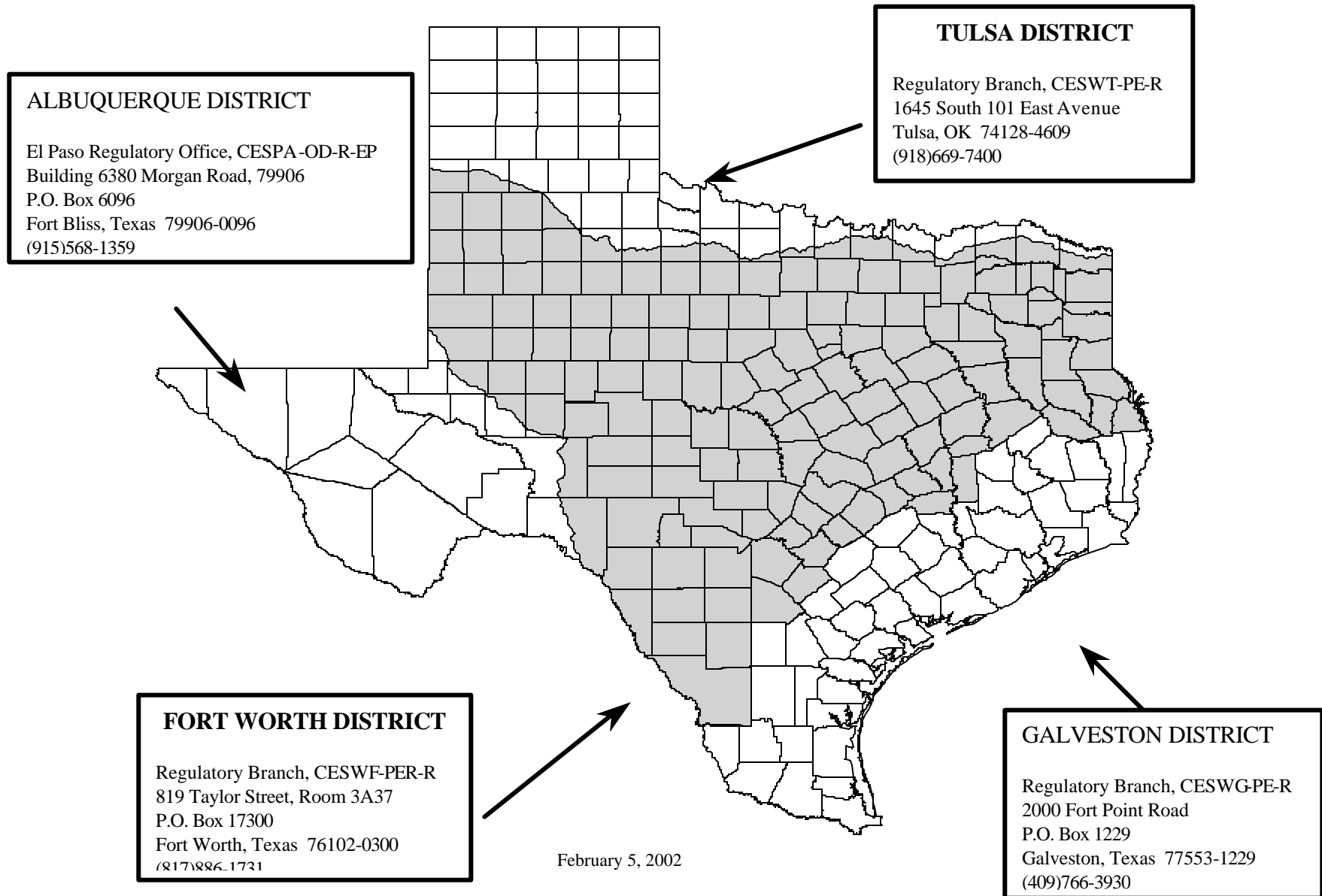
32. For all discharges proposed for authorization in Dallas, Denton, and Tarrant Counties that are within the study area of the "Final Regional Environmental Impact Statement (EIS), Trinity River and Tributaries" (May 1986), permittees shall meet the criteria and follow the guidelines specified in Section III of the Record of Decision for the Regional EIS, including the hydraulic impact requirements. A copy of these criteria and guidelines is available upon request from the Fort Worth District or at the District website www.swf.usace.army.mil/regulatory/index.html.

33. Permittees are not authorized to work in the following waters of the United States within the coastal zone of Texas:

a. Mangrove marshes: Wetlands within the Texas Gulf Coastal Plain that are occasionally or regularly flooded by brackish or saline water and have more than 40 percent cover by woody plants. The dominant woody species in this environment is the black mangrove (Avicennia germinans) with a dominant herbaceous species component of smooth cordgrass (Spartina alterniflora). (Preliminary Guide to Wetlands of the Gulf Coastal Plain. 1978. Technical Report - U.S. Army Engineer Waterways Experiment Station: Y-78-5. P.O. Box 631, Vicksburg, Miss. 39180.)

b. Coastal Dune Swales: "Wetlands and other waters of the United States that are formed as depressions within and among multiple beach ridge barriers, dune complexes, or dune areas adjacent to beaches fronting the tidal waters of the Gulf of Mexico and adjacent to the tidal waters of bays and estuaries. Coastal dune swales are generally comprised either of impermeable muds that act as reservoirs that collect precipitation or of groundwater nourished wetlands in sandy soils. As such, they generally have a high fresh to brackish water table. Vegetation species characteristically found in coastal dune swales include but are not limited to marshhay cordgrass (Spartina patens), gulfdune paspalum (Paspalum monostachyum), bulrush (Scirpus spp.), seashore paspalum (Paspalum vaginatum), common reed (Phragmites australis), groundsel bush (Baccharis halimifolia), rattlebush (Sesbania drummondii), camphor weed (Pluchea camphorata), smartweed (Polygonum spp.), water hyssop (Bacopa monnieri), cattail (Typha spp.), umbrella sedge (Cyperus spp.), softrush (Juncus spp.), sedge (Carex spp.), beakrush (Rhynchospora spp.), frog-fruit (Phyla spp.), duckweed (Lemna spp.), buttonweed (Diodia virginiana), mist flower (Eupatorium coelestinum), creeping spotflower (Acmella oppositifolia var. repens), pennywort (Hydrocotyle spp.), and bushy bluestem (Andropogon glomeratus)." (U.S. Fish and Wildlife Service, Houston, Texas, and the Texas General Land Office, Austin, Texas).

Appendix B
U.S. Army Corps of Engineers Districts within the State of Texas



APPENDIX C

NAVIGABLE WATERS OF THE UNITED STATES

For purposes of Section 10 of the Rivers and Harbors Act of 1899, the following sections of rivers, including their lakes and other impoundments, are considered to be navigable waters of the United States that fall within the jurisdiction of the Fort Worth, Albuquerque, and Tulsa districts of the U.S. Army Corps of Engineers in the states of Texas and Louisiana. For information about the navigability of sections of these and other waters that lie in the Galveston District, please contact the Galveston District at (409)766-3930.

ANGELINA RIVER: From the Sam Rayburn Dam in Jasper County upstream to U. S. Highway 59 in Nacogdoches and Angelina counties and all U. S. Army Corps of Engineers lands associated with B. A. Steinhagen Lake in Tyler and Jasper counties, Texas.

BIG CYPRESS BAYOU: From the Texas-Louisiana state line in Marion County, Texas, upstream to Ellison Creek Reservoir in Morris County, Texas.

BRAZOS RIVER: From the point of intersection of Grimes, Washington, and Waller counties upstream to Whitney Dam in Hill and Bosque counties, Texas.

COLORADO RIVER: From the Bastrop-Fayette county line upstream to Longhorn Dam in Travis County, Texas.

NECHES RIVER: U. S. Army Corps of Engineers lands associated with B. A. Steinhagen Lake in Jasper and Tyler counties, Texas.

RED RIVER: From Denison Dam on Lake Texoma upstream to Warrens Bend which is 7.25 miles northeast of Marysville, Texas, and from the U. S. Highway 71 bridge north of Texarkana, Texas, to the Oklahoma-Arkansas Border.

RIO GRANDE: From the Zapata-Webb county line upstream to the point of intersection of the Texas-New Mexico state line and Mexico.

SABINE RIVER: From the point of intersection of the Sabine-Vernon parish line in Louisiana with Newton County, Texas upstream to the Sabine River-Big Sandy Creek confluence in Upshur County, Texas.

SULPHUR RIVER: From the Texas-Arkansas state line upstream to Wright Patman Dam in Cass and Bowie counties, Texas.

TRINITY RIVER: From the point of intersection of Houston, Madison, and Walker counties upstream to Riverside Drive in Fort Worth, Tarrant County, Texas.

APPENDIX D

MITIGATING ADVERSE IMPACTS TO WATERS OF THE UNITED STATES

U.S. Army Corps of Engineers (USACE) evaluation of a project proposal submitted for authorization under this RGP includes a determination of whether the applicant has taken sufficient measures to **mitigate** the project's likely adverse impacts to the aquatic ecosystem. Applicants should employ the following three-step sequence in mitigating likely adverse project impacts: 1) take appropriate and practicable measures to **avoid** potential adverse impacts to the aquatic ecosystem; 2) take appropriate and practicable measures to **minimize** unavoidable adverse impacts to the aquatic ecosystem; and 3) take appropriate and practicable measures to **compensate** for adverse impacts to the aquatic ecosystem that cannot be reasonably avoided or minimized. **Compensatory mitigation**, then, is the restoration, enhancement, creation, or preservation of wetlands and other waters of the United States to compensate for adverse impacts to the aquatic ecosystem that cannot reasonably be avoided or minimized.

Compensatory mitigation should replace those aquatic system functions that would be lost or impaired because of the proposed activity. The appropriate amount and type of compensatory mitigation depends on the nature and extent of the project's likely adverse impact on those functions performed by the aquatic area(s) that would be impacted. These functions include, but are not limited to, flood storage and conveyance; providing habitat for fish, aquatic organisms, and other wildlife, including endangered species; sediment and erosion control; groundwater recharge; nutrient removal; water supply; production of food, fiber, and timber; and recreation. Compensatory mitigation should also be commensurate with the scope and degree of the anticipated impacts and be practicable in terms of cost, existing technology, and logistics, in light of the overall project purpose.

In general, in-kind compensatory mitigation is preferable to out-of-kind and should occur as close to the location of the adverse impacts as practicable, generally in the same watershed. However, environmentally preferable out-of-kind and/or off-site compensatory mitigation may be acceptable. Such mitigation options as mitigation banking and in-lieu fee mitigation may be appropriate when on-site or other off-site compensatory mitigation options are not available or not practicable. In some cases, particularly when adverse impacts to water quality must be addressed on-site, it is appropriate, or even necessary, to provide partial compensation at one location, such as the impact site, with the remainder occurring at an off-site location.

Normally, restoration or enhancement of functions of waters of the United States, including wetlands, is preferable to creation because the probability of successfully restoring or enhancing waters is greater than the probability of successfully creating new waters, and restoration and enhancement activities are less likely to impact upland habitats. The preservation of existing waters is appropriate as compensatory mitigation only in exceptional situations. An important element of any compensatory mitigation plan is the establishment and maintenance of vegetated buffers of native plant species, particularly along streams and other open waters.

Compensatory mitigation plans should include a thorough description of the proposed mitigation area; a description of all proposed work and structures such as grading, fills, excavation, plantings, and water control structures; plan and cross-section drawings of work and structures; a statement explaining how adverse impacts to local hydrology will be minimized; and a proposal for monitoring the success of the mitigation plan. Generally, monitoring should continue for at least five years after mitigation activities are

completed, providing planting survival requirements have been met. To ensure long-term success of a mitigation plan, an appropriate real estate arrangement, such as a deed restriction, may be required.